The Chicago Architecture Blog



Posted by Editor on Nov 6, 2012 in construction, environment, Lakeshore East, New East Side, Streeterville, The Loop, _story | 1 comment

# Radioactive Dirt Halts Construction on Residential Tower and Hotel

Construction has stopped on the residential skyscraper and hotel being built at 435 North Park Drive in the Streeterville neighborhood. It's another victim of the radioactive legacy of the Lindsay Light Company.

Just weeks ago we took pictures of heavy machinery getting the site ready for construction. But like many construction projects in the Streeterville, Gold Coast, and Loop neighborhoods, extra caution must be taken during site prep. That's because the area was once contaminated with 40,000 tons of radioactive thorium-232.

From 1904 until 1936, Lindsay Light Company manufactured mantles for gas lights in the area. If you're not familiar with mantles, they're kind of like mesh bags impregnated with chemicals that are placed inside the glass globe of a light fixture. When heated by the gas flame, they give off additional light.

US EPA RECORDS CENTER REGION 5
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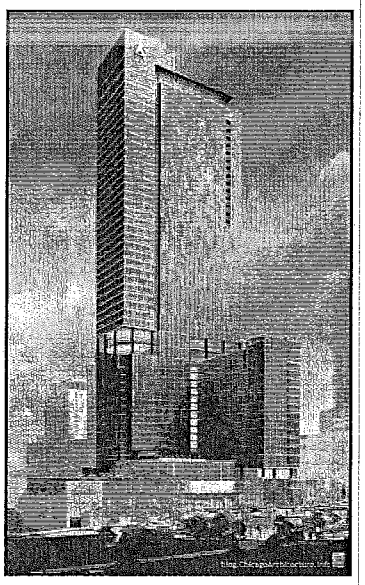

435 North Park Drive – April 24, 2012 Revision

The problem is that Lindsay didn't do a very good job of handling the thorium, maybe because back then people didn't know how dangerous it is. At Lindsay's facility at 316 East Illinois Street raw ore was processed into liquid thorium nitrate. The waste product was tailings containing thorium-232, which was dumped into the ground.

The liquid was then sent to another Lindsay facility at 161 East Grand Avenue where it was infused into the mantles. Lindsay had another facility at 22 West Hubbard Street, but no one's really sure what happened there.

The city and the EPA do constant radiological monitoring of the area with fixed sensors, detector vans, and inspections of construction sites. You can follow this link to see a map of nearly 100 locations in Streeterville and The Loop that have been tested, and read the resulting reports. Or if you'd like to know if any thorium was detected in your area and cleaned up, this 2006 map from the City of Chicago is a good place to start. The area of concern is pretty much Streeterville, Lakeshore East, and the Illinois Center.

So, what does all this have to do with 435 North Park? Well, pretty much any time there's a big construction project, there are people checking to see if any tainted dirt will be disturbed. It turns out, that is the case at 435. To quote EPA Docket V-W-12 • C-996:

*The conditions present at the Site constitute a threat to public health, welfare, or the environment based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan as amended (NCP), 40 CFR SS 300.415(b)(2).*
*These factors include, but are not limited to, the following:*

*i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or*

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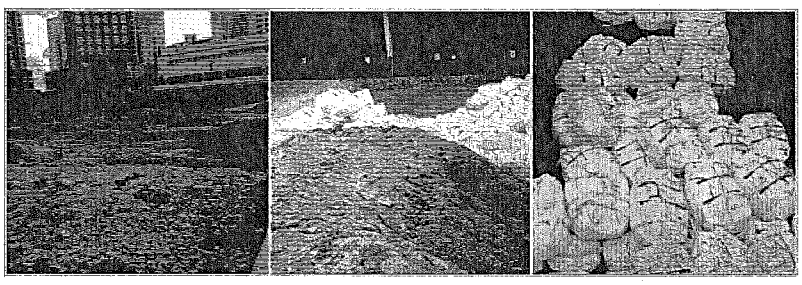
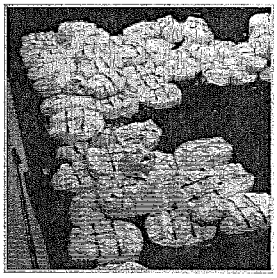
schedule is at the mercy of a cumbersome disposal process and 60 bags of angry dirt.





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# 1 Comment

Mike Flutka November 6, 2012

Unfortunate that this project has hit another snag. Such a sad, blank plot of land for such a long time. Thanks for the post, though! Very insightful as to the process and why it takes so long.

REPLY

> *contaminants; this factor is present at the Site due to the existence*
>
> *of elevated levels of thorium found in subsurface soils that will be exposed by the removal of asphalt, concrete, oils and excavation.*
>
> *ii. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate; this factor is present at the Site due to the existence of elevated leves of thorium in subsurface soils that will be exposed by the removal of asphalt, concrete, soils and excavation.*
>
> *iii. Other situations or factors that may pose threats to public health or welfare or the environment; this factor is present at the Site due to the existence of elevated levels of thorium in subsurface soils that may be exposed or unearthed during construction activities that may expose construction laborers, utility workers and the public to excessive levels of thorium.*

Just about every big skyscraper in Streeterville and Lakeshore East has been through this process before. While words like "thorium" and "radioactive" sound scary, this is just part of life in this section of Chicago. It's what happens when you turn brownfields into neighborhoods.

The EPA's web site specifically addresses cleanup operations at 435 North Park (legally known as 455 North Park Drive):

> *Prior testing has determined that there is thorium contaminated soil present in some sub-surface areas of the site. The project's owner has entered into an agreement with the U.S. Environmental Protection Agency to discover and remove, with EPA oversight, the thorium-contaminated soil from this site wherever it is discovered. Contractors use special instruments to constantly scan the soil and other materials during excavation. When thorium-contaminated material is discovered, it is immediately secured, covered and packaged for removal to a hazardous waste facility.*

And that's exactly what happened.

We counted about 60 giant bags of dirt that have been sealed up, fenced off, and are waiting to be carted away from the 435 property. It's not a simple process.

First, a facility has to be located that is willing to take the radioactive dirt. Then a sample of the dirt has to be tested by the facility to make sure what they're getting is what they're expecting. Then the dirt has to be hauled to the facility for disposal. And until those giant white bags are gone, no progress can be made on the tower.

The owners of the site are well aware of the thorium in the soil, so hopefully they made provisions in the timeline for this sort of thing. Otherwise the construction